

j50103-404/STL 3019

PERPENDICULAR MAGNETIC
RECORDING MEDIA WITH IMPROVED
INTERLAYER

ABSTRACT OF THE DISCLOSURE

A low noise, high areal recording density, perpendicular magnetic recording medium comprises:

- (a) a non-magnetic substrate having a surface; and
- (b) a layer stack formed over the substrate surface, the layer stack comprising, in overlying sequence from the substrate surface:
 - (i) a magnetically soft underlayer;
 - (ii) at least one non-magnetic interlayer; and
 - (iii) a CoCr-based, magnetically hard perpendicular recording layer;

wherein the compositions of the at least one non-magnetic interlayer and the CoCr-based, magnetically hard perpendicular recording layer are selected to provide the medium with a negative nucleation field H_n , remanent squareness of about 1, and high coercivity of at least about 5,000 Oe.

A method for manufacturing the medium by means of DC magnetron sputtering of layers (i) - (iii) is also disclosed.